

CLAIMS

WHAT IS CLAIMED IS:

1. A steam stop mechanism for a steam cleaner having a boiler with an inlet for water and an outlet for steam, comprising:

an elongated nozzle body having a central lumen of a first diameter along the nozzle body axis for connection to the boiler steam outlet;

the nozzle lumen formed with a cylindrical cavity at the proximal end having a diameter greater than that of the first diameter of the nozzle lumen to form a shoulder;

an elongated pin having a head portion with a diameter greater than the first diameter lumen diameter, the pin inserted into the cavity and lumen; and

a gasket disposed between the head and shoulder;

wherein the pin is displaced into the lumen with the head against the shoulder due to steam pressure on the proximal face of the head to block the flow of steam into and through the nozzle lumen.

2. The steam stop mechanism of claim 1, including an elongated attachment having a coupling with a pin retractor cooperating to displace the pin to a retracted position and allow steam to pass around the pin and through the nozzle lumen when the accessory coupling is attached to the nozzle.

3. The steam stop mechanism of claim 2, wherein the pin retractor is a disk formed with a center hub and spoke to form open areas to allow steam to pass when the pin is retracted into the nozzle.

4. The steam stop mechanism of claim 2, wherein the attachment is a hose with a selectively agreeable trigger at the distal end to release steam as desired.

5. The steam stop mechanism of claim 1, further including a spring in the cylindrical cavity to bias the pin against the shoulder.

6. A steam cleaner including a steam stop safety mechanism to prevent steam discharge when attaching or removing attachments, comprising:

a main body including a boiler with heating elements and including a water inlet and corresponding cap and a handle mounted to the main body and a steam outlet with a nozzle connected to the outlet, the nozzle including a steam stop mechanism, including:

an elongated nozzle body having a central lumen of a first diameter along the nozzle body axis for connection to the boiler steam outlet;

the nozzle lumen formed with a cylindrical cavity at the proximal end having a diameter greater than that of the first diameter of the nozzle lumen to form a shoulder;

an elongated pin having a head portion with a diameter greater than the first diameter lumen diameter, the pin inserted into the cavity and lumen; and

a gasket disposed between the head and shoulder;

wherein the pin is displaced into the lumen with the head against the shoulder due to steam pressure on the proximal face of the head to block the flow of steam into and through the nozzle lumen.

7. The steam stop mechanism of claim 6, including an elongated attachment having a coupling with a pin retractor cooperating to displace the pin to a retracted position and allow steam to pass around the pin and through the nozzle lumen when the accessory coupling is attached to the nozzle.

8. The steam cleaner of claim 7, wherein the pin retractor is a disk formed with a center hub and spoke to form open areas to allow steam to pass when the pin is retracted into the nozzle.

9. The steam cleaner of claim 7, wherein the attachment is a hose with a selectively agreeable trigger at the distal end to release steam as desired.

10. The steam stop of claim 6, further including a spring in the cylindrical cavity to bias the pin against the shoulder.